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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,959	12/21/2000	Mareike Katharine Klee	PHD 99,195	2130

7590 12/28/2001

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EXAMINER
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TAKAOKA, DEAN O

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 12/28/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/745,959

Applicant(s)

KLEF ET AL

Examiner

Dean O Takaoka

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 8 is/are allowed.
- 6) ☐ Claim(s) 1, 2, 4, 7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) 3, 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application):  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

## DETAILED ACTION

### *Specification*

Appropriate headings are requested to be included in the specification.

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "carrier layer is removed" (Claim 8) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The applicant's disclosure appears to show only Embodiment 1 (e.g. Fig. 1) where layer 3 is first deposited on the substrate, then layers 4, 5, and 6 respectively. Embodiment's 2 thru 4 appear to disclose a reverse order of deposition where layer 5 is the first layer that is deposited on the substrate (1). With respect to Embodiment 4, the carrier layer (defined by the specification as a layer of Si - page 12, lines 14-15)

is not shown in Fig. 1 and therefore the drawings must show every feature of the invention specified in the claims.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 7, and 9 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki et al. (U.S. Patent No. 5,519,890).

Sasaki et al. (Fig. 5) shows a filter arrangement which comprises a substrate (shown in Fig. 2 but not labeled), on which are provided a bandpass filter (446) and a notch filter (445), which filters are coupled to one another (shown);

where the notch filter is connected between the input of the bandpass filter (shown connected to node 464) and ground (shown connected to 429 or 413);

where the filter arrangement comprises ceramic electromagnetic resonators (col. 13, lines 37-38 – where the resonators are coaxial dielectric resonators);

where the notch filter (445) comprises a capacitor (429-431) and an inductance (416, 417);

where the filter device is a duplexer for digital portable telephone, including a transmitter and receiver and inherently used for wireless data transfer (e.g. since the duplexer for digital portable telephone is disclosed and would inherently be used for wireless data transfer such as digital voice communication).

It is further noted by the examiner that the limitations recited in the preamble for claims 9 thru 12 are mere statements of intended use which breathes no life into the claim and therefore is not given patentable weight by the examiner. It is the opinion of the examiner that only the filter device is being claimed and not the systems (e.g.

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mobile telephone or wireless data transfer system) or use in such systems (e.g. receiver or transmitter) such as recited by the limitations in claims 9 to 12.

### ***Allowable Subject Matter***

Claim 8 is allowed.

The Prior Art does not show a band-pass filter and trap filter provided on a substrate where a first and second electrode and a piezoelectric layer are provided on a carrier layer such that at least one resonator unit, a capacitor, and an inductor are created, with a reflection element deposited on those portions of the first electrode which belong to the resonator unit and the carrier layer removed nor is there any reason to combine any references of the Prior Art to meet the limitations of claim 8.

Claims 3, 5, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kossives et al. - shows an IC circuit with a band pass or notch filter on a substrate.

Jones - shows a circuit with a generic band pass and notch filter.

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Ruby et al. – shows a FBAR filter which can be used as a band pass or notch filter.

Ella – shows a generic BAW with acoustic mirror.

Lin et al. shows a MEM filter including a band pass or notch filter on a substrate.

Pinckley – shows a circuit with a generic band pass and notch filter.

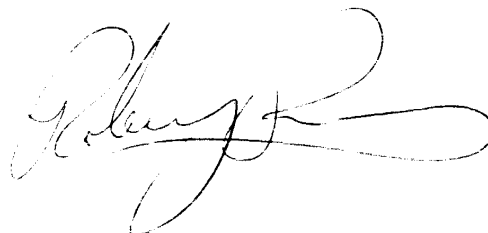
Moyski et al. – shows a circuit with a generic band pass and notch filter.

Gerzberg, Et al. – shows a RC device using semiconductor material with a band pass and notch filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O Takaoka whose telephone number is (703) 305-6242. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean O Takaoka can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-0142 for regular communications and (703) 305-0142 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.



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December 18, 2001